

CLAIMS

1. (Amended) A tractor wherein

a transmission casing is arranged in a rear portion of a vehicle body,
a front axle casing is arranged in the front portion of the vehicle body,
and

power from an engine is transmitted from an output shaft supported by
the transmission casing through a power transmission shaft to an input shaft
supported by the front axle casing,

characterized in that

a gear casing is disposed between the transmission casing and the front
axle casing,

the gear casing is detachably attached to a clutch housing disposed before
the transmission casing,

the output shaft of the transmission casing and an input shaft of the gear
casing are arranged on a same line and connected to each other, and

the input shaft of the front axle casing and an output shaft of the gear
casing are arranged on a same line and connected to each other.

2. (Amended) A tractor wherein

a transmission casing is arranged in a rear portion of a vehicle body,
a front axle casing is arranged in the front portion of the vehicle body,
and

power from an engine is transmitted from an output shaft supported by
the transmission casing through a power transmission shaft to an input shaft
supported by the front axle casing,

characterized in that

a gear casing is disposed between the transmission casing and the front
axle casing,

the gear casing is constructed integrally with a flywheel casing disposed
behind the engine,

the output shaft of the transmission casing and an input shaft of the gear casing are arranged on a same line and connected to each other, and the input shaft of the front axle casing and an output shaft of the gear casing are arranged on a same line and connected to each other.

3. (Cancelled)

4. (Cancelled)

5. (Amended) A tractor as set forth in claim 1 or 2, wherein a differential mechanism of traveling vehicle disposed in the front portion of the tractor comprises:

a differential connecting left and right output shafts, supported by the front axle casing, through a pair of planetary gear mechanisms;

a turning HST giving difference of rotation speed on the output shafts through the planetary gear mechanisms so as to perform turning; and

a mechanical turning transmission changing power from the turning HST in speed and then transmitting the power to the differential.

6. A tractor as set forth in claim 5, wherein the mechanical turning transmission is a hydraulic turning transmission.

7. A tractor as set forth in claim 5 or 6, wherein the turning transmission is interlockingly connected to a sub transmission disposed in the transmission casing.

8. (Amended) A tractor as set forth in one of claims 1, 2, 5 to 7, wherein power from the engine mounted on the traveling vehicle of the tractor is transmitted to a hydraulic clutch type forward/rearward traveling switching device and the main transmission,

subsequently the power is transmitted to the sub transmission and changed in speed, and then traveling drive is performed,

the turning HST is actuated so as to control turning, and

pressure oil is returned from the turning HST through an oil cooler to the transmission casing.

9. (Amended) A tractor as set forth in one of claims 1, 2, 5 to 7, wherein power from the engine mounted on the traveling vehicle of the tractor is transmitted to a hydraulic clutch type forward/rearward traveling switching device and the main transmission,

subsequently the power is transmitted to the sub transmission and changed in speed, and then traveling drive is performed,

the turning HST is actuated so as to control turning, and

pressure oil returning from the turning HST is supplied through an oil cooler to frictional boards of the hydraulic clutch of the forward/rearward traveling switching device.

10. (Amended) A tractor as set forth in one of claims claims 1, 2, 5 to 9, wherein

a crawler traveling unit is provided in the tractor,

the crawler traveling unit is constructed so that a trunk roller is provided between a drive sprocket and an idler and a crawler belt is wound around the drive sprocket, the idler and the trunk roller,

a shaft rotatably supporting the trunk roller is divided into plural parts, and

the divided shafts are connected to each other through an elastic member.

11. A tractor as set forth in claim 10, wherein ends of the divided shafts are shaped so as to engage with each other.

12. A tractor as set forth in claim 11, wherein the ends of the divided shafts are shaped so as to mesh with each other.